

What is claimed is:

1. A method for providing multi-user participation in an application over a network comprising:
 - providing for a user to affect a virtual state of an application on a network;
 - determining a safe latency for the user;
 - determining a field of influence and a field of commitment based upon the determined safe latency;
 - permitting the user input to affect a field of influence and prohibiting the user from affecting the field of commitment; and
 - displaying the virtual state of the application,wherein the virtual state includes the field of influence and field of commitment, and wherein a portion of the field of influence becomes the field of commitment after the determined network latency has expired.
2. The method of claim 1, wherein the field of influence and the field of commitment are displayed.
3. The method of claim 1, wherein the field of influence and the field of commitment are two-dimensional.
4. The method of claim 1, wherein the field of commitment is displayed graphically different than the field of influence.

5. The method of claim 3, wherein the field of commitment is displayed in a first color and wherein the field of influence is displayed in a second color.
6. The method of claim 4, wherein the displayed field of commitment is represented by a line that represents a path wherein the user is committed.
7. The method of claim 1, wherein displayed field of influence includes a graphic indicating options available to the user.
8. The method of claim 6, wherein the graphic indicating options available to the user is at least two arrows indicating the possible directions available to the user.
9. The method of claim 1, wherein users operate on different hardware platforms.
10. The method of claim 1, wherein the user may communicate with at least one other user or invite the other user to access the application, wherein the communication may be made by at least one of voice, text, image, or video data.
11. A computer-readable medium containing instructions, executed by a processor, for performing a method of providing multi-user participation in an application over a network comprising:
 - providing for a user to affect a virtual state of an application on a network;
 - determining a safe latency for the user;

determining a field of influence and a field of commitment based upon the determined safe latency;

permitting the user input to affect a field of influence and prohibiting the user from affecting the field of commitment; and

displaying the virtual state of the application,
wherein the virtual state includes the field of influence and field of commitment, and
wherein a portion of the field of influence becomes the field of commitment after the determined safe latency has expired.

12. The computer-readable medium of claim 11, wherein the field of influence and the field of commitment are displayed.

13. The computer-readable medium of claim 11, wherein the field of influence and the field of commitment are two-dimensional.

14. The computer-readable medium of claim 11, wherein the field of commitment is displayed graphically different than the field of influence.

15. The computer-readable medium of claim 13, wherein the field of commitment is displayed in a first color and wherein the field of influence is displayed in a second color.

16. The computer-readable medium of claim 11, wherein the displayed field of commitment is represented by a line that represents a path wherein the user is committed.

17. The computer-readable medium of claim 11, wherein displayed field of influence includes a graphic indicating options available to the user.
18. The computer-readable medium of claim 16, wherein the graphic indicating options available to the user is at least two arrows indicating the possible directions available to the user.
19. The computer-readable medium of claim 11, wherein users operate on different hardware platforms.
20. The computer-readable medium of claim 11, wherein the user may communicate with at least one other user or invite the other user to access the application, wherein the communication may be made by at least one of voice, text, image, or video data.
21. An apparatus for providing multi-user participation in an application over a network comprising:
- a memory storing a program; and
 - a processor responsive to the program to:
 - provided for a user to affect a virtual state of an application on a network;
 - determine a safe latency for the user;
 - determine a field of influence and a field of commitment based upon the determined safe latency;

permit the user input to affect a field of influence and prohibiting the user from affecting the field of commitment; and

display the virtual state of the application,

wherein the virtual state includes the field of influence and field of commitment, and

wherein a portion of the field of influence becomes the field of commitment after the determined safe latency has expired.


22. The apparatus of claim 21, wherein the field of influence and the field of commitment are displayed.

23. The apparatus of claim 21, wherein the field of influence and the field of commitment are two-dimensional.

24. The apparatus of claim 21, wherein the field of commitment is displayed graphically different than the field of influence.

25. The apparatus of claim 24, wherein the field of commitment is displayed in a first color and wherein the field of influence is displayed in a second color.

26. The apparatus of claim 21, wherein the displayed field of commitment is represented by a line that represents a path wherein the user is committed.

27. The apparatus of claim 21, wherein displayed field of influence includes a graphic indicating options available to the user.
28. The apparatus of claim 27, wherein the graphic indicating options available to the user is at least two arrows indicating the possible directions available to the user.
29. The apparatus of claim 21, wherein users operate on different hardware platforms.
30. The apparatus of claim 21, wherein the user may communicate with at least one other user or invite the other user to access the application, wherein the communication may be made by at least one of voice, text, image, or video data.
31. A method of compensating for network latencies, comprising: 
- determining a safe latency associated with a client in a multi-client application;
 - computing, based upon the determined safe latency for the client, a first state configured to receive client input;
 - computing, based upon the determined safe latency for the client, a second state unaffected by client input; and
 - re-computing the first state and the second state for the client as the application progresses.

32. The method of claim 31, wherein the first state and the second state represent virtual spatial dimensions.
33. The method of claim 32, wherein the spatial dimensions are two dimensional.
34. The method of claim 32, wherein the first state corresponds to a field of influence and the second state corresponds to a field of commitment.
35. The method of claim 34, further comprising:
- displaying the field of influence and the field of commitment; and
- transforming a portion of the field of influence into the field of commitment after the determined safe latency has expired.
36. The method claim 35, wherein the field of influence and the field of commitment are distinguished by different graphical representations.
37. The method of claim 31, wherein the clients include different hardware platforms.

38. The method of claim 37, wherein a first client comprises a personal computer and a second client comprises a portable device.

39. A computer-readable medium containing instructions, executed by a processor, for performing a method of compensating for network latencies, comprising:

determining a safe latency associated with a client in a multi-client application;

computing, based upon the determined safe latency for the client, a first state configured to receive client input;

computing, based upon the determined safe latency for the client, a second state unaffected by client input; and

re-computing the first state and the second state for the client as the application progresses.

40. The computer-readable medium of claim 39, wherein the first state and the second state represent virtual spatial dimensions.

41. The computer-readable medium of claim 39, wherein the spatial dimensions are two dimensional.

42. The computer-readable medium of claim 39, wherein the first state corresponds to a field of influence and the second state corresponds to a field of commitment.

43. The computer-readable medium of claim 41, further comprising:

displaying the field of influence and the field of commitment; and

transforming a portion of the field of influence into the field of commitment after the determined safe latency has expired.

44. The computer-readable medium claim 42, wherein the field of influence and the field of commitment are distinguished by different graphical representations.

45. The computer-readable medium of claim 39, wherein the clients include different hardware platforms.

46. The computer-readable medium of claim 45, wherein a first client comprises a personal computer and a second client comprises a portable device.

47. An apparatus for compensating for network latencies, comprising:

a memory storing a program; and

a processor responsive to the program to

determine a safe latency associated with a client in a multi-client application;

compute based upon the determined safe latency for the client, a first state configured to receive client input;

compute based upon the determined safe latency for the client, a second state unaffected by client input; and

re-compute the first state and the second state for each client as the application progresses.

48. The apparatus of claim 47, wherein the first state and the second state represent virtual spatial dimensions.

49. The apparatus of claim 48, wherein the spatial dimensions are two dimensional.

50. The apparatus of claim 48, wherein the first state corresponds to a field of influence and the second state corresponds to a field of commitment.

51. The apparatus of claim 50, further comprising:

displaying the field of influence and the field of commitment; and

transforming a portion of the field of influence into the field of commitment after the determined safe latency has expired.

52. The apparatus claim 47, wherein the field of influence and the field of commitment are distinguished by different graphical representations.

53. The apparatus of claim 47, wherein the clients include different hardware platforms.

54. The apparatus of claim 53, wherein a first client comprises a personal computer and a second client comprises a portable device.

55. The method of claim 1, wherein the method further includes:
transmitting data in sequenced packets to the user;
determining a packet has not been received in a timely manner by the user; and
reducing the number of packets to be sent to clear a backlog of subsequent packets by concatenating the subsequent packets together.